“Utilitarian Flora of Painganga Wildlife Sanctuary, Maharashtra, India”.

Synopsis in Candidature for the Degree of

Doctor of Philosophy in Botany

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Table of Contents

Sr. No.	Contents	Page No
1.	Research Title.	3
2.	Introduction. • Origin of the research problem. • Interdisciplinary relevance.	3
3.	Literature Review, Research and development in the Subject. • International and National Status.	4
4.	Aim and Objectives.	6
5.	Methodology.	6
6.	A tentative chapter scheme.	7
7.	Significance of the study/Outcomes.	7
8.	Reference.	7

"Utilitarian Flora of Painganga Wildlife Sanctuary, Maharashtra, India".

Introduction:

Painganga Wildlife Sanctuary is rich store house of Medicinal plants. Tribal's in Painganga Wildlife Sanctuary have great faith in effectiveness of medicinal plants. The present study was carried out to explore traditional medicinal knowledge of plants of Painganga Wildlife Sanctuary, Maharashtra, India. It is located between 19° 36' to 19° 7' North latitude and 77° 42' to 77° 7' East longitude. This region rich in divers flora and suitable for ethnobotanical exploration. Painganga Wildlife Sanctuary is the name given to the protected forests on both side of the Painganga River which divides Yavatmal district and Nanded district Maharashtra, India. The Painganga Wildlife Sanctuary was established on January 1, 1996. It covers 35 villages an area of about 325 sq. km. in the forest, in which teak is the main tree. Supervision and direct control is in the hands of sub-conservator Pandharkavda, reporting to the Government of Maharashtra.

Due to annual rainfall of between 1000 mm and 1500 mm and the surrounding Painganga river reservoir, many plants commonly grow in the sanctuary area, including, sagwan (*Tectona grandis*) Palas (*Butea monosperma*) Anjan (*Terminalia arjuna*), Amla (*Phyllanthus emblica*), Gulvel (*Tinospora cordifolia*), Charoli (*Buchanania cochinchinesis*), Dhavda (*Anogeissus latifolia*), Behda (*Terminalia bellirica*), Moha (*Madhuca longifolia*), and Haladberi (*Haldina cordifolia*).

There are many species of herbs in the sanctuary, also reeds and grasses (for example, kusali, khas, tirkhadi, pavanya, marvel, aghada, kena)

Origin of the research problem

The indigenous knowledge of plants used in medicine and food purpose is based and built on many years of experience. Tribal people use enormous range of plants for their livelihood. Their understanding and perfections in using forest resources is unique and which is passed on by their traditions, taboos, totems, folklore, etc., by means of oral communication from one generation to another. They have developed strong belief in their own recipes. The plant knowledge gathered by trial and error, in the course of centuries is being preserved in the tribal communities since ages. But due to intrusion of modern civilization and the activities like

deforestation, resettlement projects, industrialization and changing subsistence economies, the living standard of tribal's is affected areas in changing very fast, even the ideas of herbals remedies is being abandoned by most of the people belonging to new generation. The old people and the people who practice herbal drugs are the only remaining sources.

The medicine men generally inhabit in remote areas. They are experts for one or the other diseases. The vast knowledge needs to be assembled and recorded.

The identical uses of certain plants for various purpose by the indigenous people in different places may not be a mere co-incidence but a positive indication of some useful properties in these plants, as most of the plant uses recorded are already reported from different areas. Discovery of many more such uses will be helpful in discovering some regularities in ethnobotanical uses of plants.

One of the reasons to undertake the present ethnobotanical studies is the richness of these areas from ethnobotanical point of view, as these are also rich in floristic as well as in ethinic diversity.

Some packets of this area work done, but all area is not covered in this work vast area must to be cover.

So far some people has done work on ethnobotany however after the exploratory work in the region it has been observed that still much attention is require as per as work medicinal data so the topic has been selected.

Interdisciplinary relevance

The research work is interdisciplinary with plant Taxonomy, Ethnobotany, Medicinal Plant Botany and Biodiversity like subjects.

Since study is focused in useful plants utilized by the aboriginal people residing area.

Literature Review, Research and development in the subject

Though the emergence of ethnobotany as an independent discipline is a century old but the studies in India have been carried out mainly in the last four decades. The ethnobotanical literature in the world has been growing rapidly over the last hundred years.

There are now several journals, magazines and bulletins like Ethnobotany, Economic Botany, journal of Economic and Taxonomic Botany, Indian Journal of Natural Product

Radiance, Ethnobotanical Leaflets, Life Science Leaflets, Journal of Non-Timber forest Products, etc.

Several books have been published on the subjects covering various aspects. Among the books worth mentioning are An Introducing to Ethnobotany by Faulk (1958), which is the first book on ethnobotany and contains various topics of economic in general. The Ethnobotany of Western Washington by Gunther (1945), is one of the volume of university of Washington Publication in anthropology, devoted to the ethnobotany of specific area. The book American Indian Medicine by Vogal (1970), include uses of Medicinal Plants of American Indians. Nature and Status of Ethnobotany by ford (1978) included 17 manuscripts on various issues of ethnobotany. Bibliography of Interest in Utilization of Vascular Aquatic Plants by Boyd (1972), and Bibliography on Botany and Ethnobotany of China by Metailie (1981) are the bibliographic reference. While the dictionaries published on ethnobotany throughout the world outside India are Dariene Ethnobotanical Dicionary by Duke (1968) and Isthmian Ethnobotanical Dictionary by Duke (1986).

International and National Status

International Status

The maximum work in this field is being done in the United States of America. At present, ethnobotanical researchers at different centers through out the world are being undertaken at several places. The Botanical Museum of Harvard University In Massachusetts, the Museum of Anthropology, University of Michigan, The Richard Spruce Foundation at Massachusetts and Department of Anthropology, California, State University are some of the main centers in United States of America.

National Status

In India ethnobotanical research has been intensified at different research centers. The main institution/organization, engaged in the research are different regional offices of Botanical Survey of India, Institute of Ethnobotany, -Gwalior, Central Drug Research Institute, Central Institute of Medicinal and Aromatic Plants and Birbal Sahani Institute of Palaeobotany – Lucknow, Central Council for Research in Ayurveda and Siddha, Central Council for Research in Unani Medicine and National Bureau of Plant Genetic Resources – New Delhi, Regional Research Laboratory – Jammu Tawi (Jammu and Kashmir), Tropical Botanical Garden and Research Institute – Thiruvananthapuram (Kerala), M. S. Swaminathan Research Foundation

– Chennai (Tamilnadu), Agharkar Research Institute – Pune (Maharashtra), and in Several Colleges and Universities. The studies are undertaken by number of research workers in India.

Objective

The main objective ethnobotanical studies are:-

- Survey of tribal and forest dwellers areas for collection, identification, and documentation of plants used for food, medicine, fodder, etc.
- The study the impact of tribal culture on vegetation, which includes primitive agricultural and forestry operations to preserve genetic resource of useful plants for developing new crops.
- Literature survey of screening for phytochemical and pharmacological aspects of plants for investigation of active principles of the plants or plants used in medicine, pesticide and fish poison, etc.
- Investigation of the wild edibles like fruits, roots tubers, seeds, etc.
- To study the conservation practices among the tribal by investigation the impact of several myths, totems, sacred groves and taboos, etc.
- The documents the ethnobotanical data from existing literature and from actual field work and a comparison to be made to find the unknown uses.

Materials and Methods

This will involve extensive survey and documentation of useful plants. The methodology used for gathering information through interviews with people with knowledge of plant for economic purpose, traditional medicine, etc. Interviews will be considered of open and semi-structured questions and the information collected will be verified with different informers as well as with the same informant on different occasions. Plants will be identified in the laboratory using keys for botanical determination given in different standard floras.

The plants and their uses will be subsequently analyzed according to their utility. For this purpose, a set of categories will be established. Once the information had been processed, the information collected will also be analyzed quantitatively to obtain the following data; most cited species, plants to which most uses, parts most frequently mentioned and the most commonly mentioned preparation and application processes.

Finally, the uses of every plant will be checked against information published earlier from different parts of country. Based on this analysis the plants not reported earlier for particular use will be considered as uses less known; while plants uses which already have mention in literature but plant part used in the area if are different will be analyzed separately so as give information which may be useful in conserving these plants part will prove credibility of the claim.

A Tentative chapter scheme

Thesis will be divided into five chapters as

1. Introduction
2. Literature Review
3. Methodology
4. Plant Enumeration
5. Result and Discussion

Significance of the Study/Outcomes

One of the reasons to undertake the present ethnobotanical studies in the richness of these areas from ethnobotanical point of view, as these are also rich in floristic as well as in ethnic diversity.

- Ethnobotany is considered to encompass all studies which concern the mutual relationship between plants and traditional people (Cotton, 1996).
- In broad terms, ethnobotany is the study of the interrelationship between plants and people.
- According to Ford 1994, ethnobotany is concerned with a wide range of interest of plants in cultural and ecologist context.
- According to Martin 1995, ethnobotany is the part of ethnoecology which concerns plants.
- Turner 1996 has given an appropriate definition that is “the science of people’s interaction with plants”.
- Penganga reserve forest have thick forest belt.
- Beside Penganga river the indigenous people have good knowledge about medicinal plants.
- The study gives further lead for the researchers.

- The Study is cover different ethno-medicinal plants in different diseases.
- The Study covers different areas like Ethno-medicinal, Ethno-veterinary, Fish poison plants, Edible etc.

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